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THE AGRICULTURAL • SITUATION •

JULY 1944

A Brief Summary of Economic Conditions

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CROP PRODUCTION this year may equal the near-record 1943 output, according to July 1 forecasts. Acreage harvested may be the greatest yet except for the years 1929-32. Drought in the East and South, however, threatens to reduce yields somewhat. * * * The 1944 wheat crop is estimated at a record-smashing 1.13 billion bushels—the wheat loan rate was raised to 90 percent of parity. Nearly 3 billion bushels of corn is forecast, fifth largest crop in history, together with near-record production of other grains, hay, and tobacco. Deciduous fruit production is expected to be almost a fifth higher than in 1943 while vegetable output is up 10 percent. * * * In contrast, the 1944 cotton acreage is the smallest since 1895 which, together with increased cotton ceiling prices under the Stabilization Extension Act, are chief reasons for the 10-market average price of cotton pushing above 22 cents for the first time since 1928. That Act also increases cotton loans to 92½ percent of parity. * * * The new stabilization law directs the President to use all lawful means to support farm prices of many commodities at full parity or at the highest price received during the first nine months of 1942 adjusted for gross inequities and for seasonal variation.

Commodity Reviews

FEED

THE PERIOD of shortest supply of feed grains in relation to demand appears to have passed for the current feeding year ending next September. Although too early in the season to be able to forecast probable total feed-grain production in 1944, indications point to fairly optimistic prospects.

Large increases in livestock and poultry numbers during 1941-43 compared with supplies of feed caused feed reserves to be reduced, notwithstanding the feeding of large quantities of Government wheat in the 1942 and 1943 crop years. Demand for all concentrates has been very strong during 1944. Supplies of feed grains entering commercial channels during recent months have not been of sufficient volume to fully satisfy demand.

Total reserves of corn, oats, and barley at the end of their respective crop years are likely to be little more than half as large as the average for the 1937-41 period, when substantial reserves were accumulated, but the carry-over probably will be about the same as the long-time average.

On July 1 a 302-million bushel crop of barley was in prospect for 1944, about 6 percent less than in 1943, but somewhat more than had been expected earlier this year. June 1 carry-over of barley was 67.6 million bushels, the smallest since 1940, but still considerably above that of drought years when it dropped to as low as 22 million bushels (1935).

The 1944 production of oats is forecast at 1,183 million bushels. A crop this size would be 3½ percent larger than the 1943 production, and 15 percent larger than the 10-year (1933-42) average production. It would be, however, 12 percent smaller than the record crop of 1942.

July 1 prospects point to the fifth largest corn crop on record and,

though it is too early to judge the final outturn, a record 57 percent of the acreage is in hybrid varieties.

A large hay crop is in prospect for 1944, about equal to 1943's large one and exceeded only by the record crop of 1942. Pasture conditions on July 1 were generally favorable, but rain was needed in most of the eastern part of the country.

**United States Feed Balance, 1937-44,
Year Beginning October**

[In million tons]

	1937-41 average	1943 ¹	1944 ¹
SUPPLY			
Stocks, beginning crop year ²	17.1	16.7	12.0
Feed grain production:			
Corn.....	72.3	86.1	83.5
Oats.....	18.1	18.3	18.9
Barley.....	6.8	7.7	7.2
Grain sorghums.....	2.2	2.9	3.2
Total production.....	99.4	115.0	112.8
Imported grains, domestic wheat and rye fed.....	4.6	14.6	-----
Byproduct feeds.....	16.5	19.9	-----
Total supply.....	137.6	166.2	-----
UTILIZATION			
Feed grains fed (including imports).....	85.4	110.9	-----
Wheat and rye fed (including imports).....	4.4	12.6	-----
Byproduct feeds fed.....	16.5	19.9	-----
Total fed.....	106.3	143.4	-----
Feed grains for food, seed, industry.....	11.9	12.9	-----
Total utilization.....	118.2	156.3	-----
Total utilization adjusted to crop year basis.....	117.5	154.2	-----
Stocks, end crop year ²	20.1	12.0	-----

¹ Preliminary—subject to change as more data become available.

² Stocks of corn Oct. 1, oats July 1, barley June 1, sorghum stocks not reported. Includes stocks on farms, at terminal markets, and in CCC bins.

PIG CROP

THIS year's expected 88 million pig crop will be about a fourth smaller than last year, though the third largest annual crop on record. In 1943 the

crop was 122 million head, and the average for the ten years, 1933-42, was 75 million head.

The 1944 spring crop totaled 56 million head, 24 percent below last year's record of 74 million head, but only 8 percent less than the second largest spring crop in 1942.

On June 1 farmers reported they intend to breed some 50 million sows to farrow this fall, compared with 76 million actually farrowed last fall. Such farrowings would result in a fall pig crop of about 32 million head, assuming that the June breeding intentions are carried and the number of pigs saved per litter is average. This would be 33 percent less than last year's record fall pig crop, and 27 percent less than the near-record one of 1942.

A reduction in the number of pigs to be raised this year has been largely the result of: (1) the least favorable hog-feed price relationships during the past winter and spring since late 1940, (2) a very small supply of feed grains in relation to the number of grain-consuming animals on farms, and (3) an announced reduced support price for hogs in October. In addition, last winter's and spring's market gluts of hogs had considerable influence on the raising of fewer pigs this year. Closely related to the second point above is the fact that for the first time since 1941, current feed production must supply nearly all the needs for animal feeding next year because there are very little reserve supplies left.

Despite this sharp reduction in the pig crop, slaughter supplies of hogs will probably be larger this year than last. Reduced pork production will not begin until this fall.

CASH RECEIPTS

TOTAL receipts from farm marketings for the first half of 1944 are estimated at about 8.65 billion dollars compared with 7.80 billion for the

same period of 1943. Largely because of the record hog and cattle slaughter early this year, marketing receipts for all livestock during the first six months of 1944 were about 580 million dollars more than for the same period in 1943, while receipts for all crops increased about 267 million. Receipts for meat animals were about 486 million dollars higher, dairy products about 110 million more, while poultry and eggs were about 24 million less. Principle increases in receipts from crops were in food grains, feed grains and hay, tobacco, and fruit and nuts.

The accompanying table lists a preliminary forecast of farm marketing receipts by commodity groups for January through June 1944 compared with the revised estimate for the same period in 1943.

Farm Marketing Receipts for First Half of 1943 and 1944

Commodity group	January through June 1943 ¹	January through June 1944 ²	1944 change from 1943
	Million dollars	Million dollars	Million dollars
Crops:			
Food grains.....	199	275	76
Feed grains and hay.....	439	500	61
Cotton and cottonseed.....	267	265	-2
Oil-bearing crops.....	180	170	-10
Tobacco.....	116	150	34
Vegetables.....	667	695	28
Fruit and nuts.....	369	425	56
Total crops.....	2,423	2,690	267
Livestock:			
Meat animals.....	2,784	3,270	486
Dairy products.....	1,390	1,500	110
Poultry and eggs.....	1,104	1,080	-24
Total livestock.....	5,380	5,960	580
Total receipts from marketings.....	7,803	8,650	847

¹ Revised estimate. ² Preliminary forecast.

WHEAT

THIS YEAR will see the Nation's largest wheat crop and its second biggest supply of wheat in history, according to July indications. The July crop report estimated a 1,128 million bushel crop for 1944 (93 million above the June indication)

Index Numbers of Prices Received and Paid by Farmers
 [1910-14=100]

Year and month	Prices received	Prices paid, interest and taxes	Parity ratio ¹
1943			
January.....	181	157	115
February.....	184	159	116
March.....	192	160	120
April.....	197	162	122
May.....	194	163	119
June.....	195	164	119
July.....	193	165	117
August.....	192	165	116
September.....	193	165	117
October.....	194	166	117
November.....	194	167	116
December.....	196	169	116
1944			
January.....	196	169	116
February.....	195	170	115
March.....	196	170	115
April.....	196	170	115
May.....	194	170	114
June.....	193	170	114

¹ Ratio of prices received to prices paid, interest, and taxes.

consisting of 793 million bushels of winter wheat and 335 million of spring. Weather and other factors, however, could materially change these figures.

The estimated July 1, 1944, carryover of 350 million bushels when added to this crop brings the supply at the beginning of the wheat year to 1,478 million bushels, somewhat more than 1,453 million bushels a year earlier and well above the 1,032 million average for 1933-42. This carryover being 50 million bushels above the May forecast reflects larger imports and somewhat smaller wheat feeding than expected earlier.

Under ordinary conditions such very large supplies would exceed probable disappearance, hence stocks would accumulate. But in the year ahead disappearance is expected to continue to be very large.

Because conditions are now subject to considerable change, greater uncertainty than usual is involved in forecasting distribution. If a July 1, 1945 carryover of 350 million bushels is achieved a total disappearance of about 1,125 million bushels is indicated. Such a disappearance might

be divided as follows, in millions of bushels: food 540, feed and alcohol 375-400, exports 125, and seed 80.

A national 1945 goal of 67 to 70 million acres planted to winter and spring wheat was suggested by the War Food Administrator early in June. This would be above the 67 million acres actually planted for the 1944 crop and the 55 million planted in 1943. The national goal has been submitted to the States for final determination, with the final State goals expected to be announced sometime in July.

POULTRY AND EGGS

REFLECTING the considerably less favorable egg-feed price relationships this spring, the number of chickens being raised for flock replacements is much smaller than in 1943, and very heavy culling of laying flocks is in progress. On July 1 the number of young chickens on farms was 19 percent smaller than a year earlier; present indications point to 8 to 10 percent fewer layers by January 1, 1945, than on January 1 of this year.

With continued heavy culling of laying flocks in prospect for the next several months and fewer birds raised for replacement purposes, egg production throughout 1944 probably will continue to decline relative to 1943. In the closing months of this year, egg output is likely to be moderately below the record of a year earlier. Increases in egg prices from spring to fall are likely to be greater this year than in 1943, particularly for currently produced eggs.

Wholesale egg prices increased during June as a result of the seasonally declining egg supply in the face of the prevailing strong consumer demand for eggs, supplemented by continued Government purchases for price support. In early July, wholesale prices of eggs at Chicago and New York were 2 to 6 cents per dozen higher than the season's low level of late May, but around 5 cents per dozen lower than

in early July 1943. Prices received by farmers in the United States for eggs in mid-June averaged 28.1 cents per dozen compared with 35.2 cents in June 1943. So far in 1944 the Commodity Credit Corporation has purchased around 6 million cases of shell eggs for price support, in addition to 167 million pounds of dried egg for direct war uses. Because of the tight cooler-storage situation, 128,000 cases of shell eggs have been diverted to animal feed.

DAIRY PRODUCTS

ALTHOUGH civilian supplies of most dairy products were larger during the April-June quarter because milk production was at its highest seasonal level for the year, it is probable that during the last half of the year civilian supplies of most products will be about the same as during the corresponding period of 1943. Creamery butter production is

expected to be somewhat less in the last half of 1944 as in the corresponding period of last year. American cheese and evaporated milk production may be slightly larger than a year ago. Milk production is likely to follow last year's pattern, which would leave most fluid milk markets in a tight position during the months of lowest production.

Milk production increased irregularly throughout the country during May and early June with marketing facilities in some areas operating at capacity as the seasonal production peak was passed early in June. Total U. S. milk production on farms in June was estimated at 12.5 billion pounds, a less-than-usual seasonal increase from May.

Milk production per cow decreased more than seasonally during June, as compared with a less-than-seasonal decrease in June last year.

July 1 dairy pasture conditions averaged 85.5, compared with 90.4 a

Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

	5-year average		June 1943	May 1944	June 1944	Parity price, June 1944
	August 1909-July 1914	January 1935-Dec- ember 1939				
Wheat (bushels).....	dollars	0.884	0.837	1.24	1.47	1.43
Corn (bushel).....	do	.642	.691	1.06	1.15	1.15
Oats (bushel).....	do	.399	3.40	.648	.799	.788
Rice (bushel).....	do	.813	.742	1.82	1.78	1.75
Cotton (pound).....	cents	12.4	10.29	19.96	19.80	20.16
Potatoes (bushel).....	dollars	.697	.717	1.84	1.34	1.25
Hay (ton).....	do	11.87	8.87	12.20	16.10	15.00
Soybeans (bushel).....	do	2.96	.954	1.73	1.93	1.63
Peanuts (pound).....	cents	4.8	3.55	7.01	7.74	8.16
Apples (bushel).....	dollars	.96	.90	2.70	3.19	3.14
Oranges, on tree, per box.....	do	1.81	1.11	2.59	2.43	2.45
Hogs (hundredweight).....	do	7.27	6.38	13.60	12.70	12.60
Beef cattle (hundredweight).....	do	5.42	6.56	12.70	12.10	12.00
Veal calves (hundredweight).....	do	6.75	7.80	14.20	13.30	13.20
Lambs (hundredweight).....	do	5.88	7.79	13.50	13.40	13.20
Butterfat (pound).....	cents	26.3	29.1	49.2	50.7	50.2
Milk, wholesale (100 pounds).....	dollars	1.60	1.81	1.03	1.13	1.10
Chickens (pounds).....	cents	11.4	14.9	25.1	24.4	23.8
Eggs (dozen).....	do	21.5	21.7	35.2	27.2	28.1
Wool (pound).....	do	18.3	23.8	41.3	40.6	42.0

¹ Revised.

² Comparable base price, August 1909-July 1914.

³ Comparable price computed under sec. 3 (b) Price Control Act.

⁴ Comparable base price, August 1919-July 1929.

⁵ Does not include dairy production payments since May 1944.

⁶ Adjusted for seasonality.

⁷ Preliminary.

year earlier and 85.5 for the five-year (1939-43) average for that date. If pasture conditions continue only average for the balance of the season, milk production might decline more rapidly than usual.

To ease the problem of fully utilizing the expected large milk supplies, War Food Administration eased quota restrictions of certain orders. During May and June, milk dealers in markets controlled by WFO 79 were permitted to sell 100 percent as much fluid cream and fluid milk byproducts as in June 1943. In addition, further increases in quotas were granted on a marketwide basis in some markets, and to individual handlers in others where there would otherwise have been unusual difficulty in utilizing milk supplies.

Quotas previously in effect on fluid cream and fluid milk byproducts were 75 percent of sales of these products in June 1943, and the quotas will again be 75 percent after June 30. Quotas on use of milk solids in ice cream were raised from 65 to 75 percent of base period use for May, 85 percent for June, and 75 percent for July.

The permitted milk solids content of ice cream was increased to 24 percent for these three months. Previously, the milk solids content was not permitted to exceed 22 percent, and this limit will again be in effect after July.

TOBACCO

DOMESTIC tobacco production was estimated on July 1 at 1.5 billion pounds, 85 million pounds more than the 1943 production and one of the largest crops since 1939. Despite a late spring, blue mold damage to plant beds, and labor shortages, farmers planted the largest acreage since 1939.

In general, the outlook for tobacco during the next year or so is regarded as favorable in view of the continued strong demand for leaf tobacco. Stocks

of aged tobacco held in this country and in Britain are low in relation to demand, while the supply of United States grown leaf in most of the countries on the European continent and in the Far East are probably nonexistent. It is possible that exports during the next 2 years may increase considerably over present levels.

Chiefly because of the container shortage, production difficulties, and large military requirements, civilian consumption of tobacco products in this country has increased little if any over last year, but the over-all consumption, including the military is probably above the record 1943 level.

The 1944-45 flue-cured tobacco marketing season will begin July 24 with the opening of the Georgia-Florida markets. Demand for the tobacco is expected to be strong and prices favorable. It is expected that the 1944 crop of flue-cured will be placed under a maximum price regulation which will provide for a price differential between tied and untied tobacco.

The 1943 crop of Maryland, now selling, is under price regulation for the first time. Last year's crop of Maryland was one of the smallest on record and of exceptionally poor quality. Prices of better grades of Maryland have been selling at the established ceiling of 62 cents per pound, but partly because of the large percentage of poor-quality leaf, the season's average price to date is below the average of 56 cents for the 1942 crop.

FRUIT

WITH favorable fruit prospects likely during the 1944-45 season, deciduous fruit production, based on July 1 conditions, will probably be one-fifth larger than the short crop last year and moderately larger than the 1933-42 average. On this date citrus groves appeared in good condition, with indications of another large crop of citrus fruit in 1944-45.

This year's production of cherries, peaches, and pears may be larger than the 1943 crops by 67 percent, 64 percent, and 13 percent, respectively. Apricot production will probably be 3 times larger than last year's small crop. Indications now point to a commercial apple crop considerably larger than in 1943, and a grape crop 10 percent less than last year's record.

Total 1944 peach production of 69,201,000 bushels will probably be the third largest on record, according to July 1 prospects, exceeded only by the 1941 and 1931 crops. Last year's crop was 42,180,000 bushels, and the 10-year (1933-42) average was 57,618,000 bushels. Only Arizona appears likely not to show an increase over the 1943 crop, while indications are that the crops in 27 States will be larger than the 10-year averages.

Slightly over 43 percent of the total United States crop will be supplied by California, where a production of 30,336,000 bushels is expected. This total is second only to the 1930 crop of 34 million bushels. This year's estimated production in California is 20 percent higher than last year's crop and 31 percent above the 10-year average.

Production of California Clingstones, used primarily for canning, is expected to total 18,793,000 bushels or approximately 30 percent more than both the 1943 crop and the 10-year average. The probable 11,543,000 bushel crop of California Freestones is nearly a million bushels more than last year, nearly 3 million larger than the 10-year average, and the largest crop since 1930.

Early peach production of 14,779,000 bushels in 10 States this year is smaller than average, 12 percent less than the 10-year average, but nearly 3 times last year's production.

The season average price per bushel received by farmers for peaches in 1943 was \$2.56 or 72 percent above 1942 prices. Early Rose peaches this year brought \$3.50 per one-half bushel

basket, f. o. b., for the week ended June 10, as compared with \$3 a year earlier. At the same time Redbird peaches from the Carolinas sold for \$4.42 per one-half bushel on the New York wholesale market, as compared with \$3.68 a year ago.

Ceiling prices for fresh apricots, plums, sweet cherries, and Italian prunes, f. o. b. at country shipping points, became effective June 13. Somewhat lower prices for these fruits than prevailed last season are expected to result from this measure.

VEGETABLES

A DEQUATE supplies of fresh vegetables are expected this summer. Indications are that planted acreage of total 1944 truck crops for the fresh market will be one-fifth higher than in 1943. Summer truck crop production is expected to be 13 percent higher than in 1943 and 9 percent more than the 10-year (1933-42) average.

Plentiful onion crops are in prospect. Onion production during the late spring and early summer has been estimated at about two-thirds above a year ago. Late summer onion crops may be 33 percent higher than in 1943. Production of cabbage and early summer snap beans will also probably represent an increase over 1943. No significant change is anticipated in summer tomato supplies. Production of early Irish potatoes in the late spring States was estimated on July 1 at 29 million bushels, as compared with 34 million a year earlier. A crop of approximately 18.9 million bushels is expected in the summer producing States, as compared with about 23 million bushels in 1943.

Estimated 1944 truck crop production compared on a percentage basis with 1943 and the 10-year average follows: Late spring cabbage 105 and 82 percent; early summer cabbage 116 and 121; late spring onions 178 and 163; early summer onions 170 and 120; late spring tomatoes 89 and 87; early

summer tomatoes 96 and 113; late spring watermelons 161 and 109; and early summer watermelons 125 and 93 percent.

FARM LABOR

THIS third summer since the United States entered World War II finds the nation's farmers and ranchers with an even more limited supply of experienced, skilled labor than last year and the year before, but offsetting the shortage to a considerable extent by better utilization of labor and more efficient production practices.

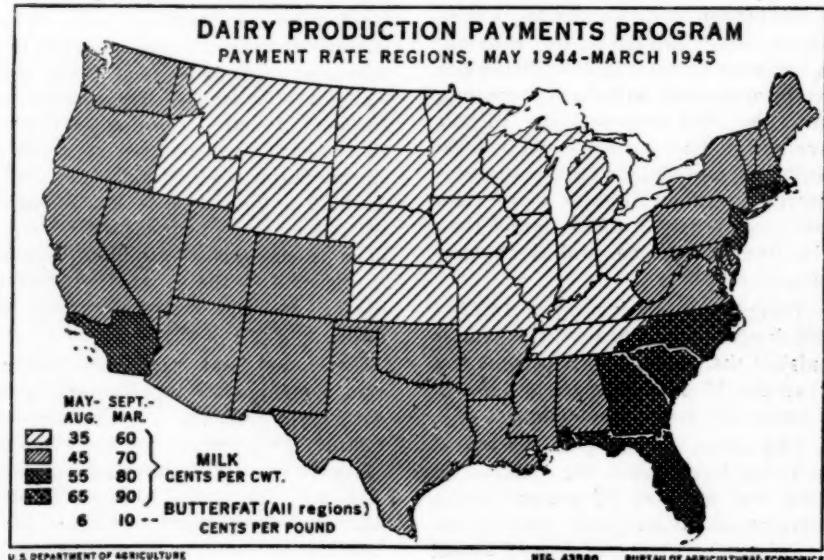
Total farm employment was estimated at 11,285,000 for the first of June, an increase of 12 percent from May 1 compared with a normal rise of 8 percent from May 1 to June 1. Total employment on June 1, however, was 3 percent below a year earlier, due mainly to a 9.5 percent decrease in the number of hired workers, as the number of family workers was only one percent below June 1, 1943. Compared with a year ago, declines

in total employment were shown in all regions except the Pacific.

Family labor (including farm operator) totaled 8,845,000 persons on June 1—117,000 under June 1, 1943. Hired help reached 2,440,000 by the first of June compared to 2,697,000 on that date last year. Family labor, including operators and unpaid family workers, composed 78 percent of the total farm labor force on June first.

Labor will continue to be a critical factor in farm and ranch operations through the summer and fall. The drafting of younger farm workers, the administrative difficulties of shifting workers from one area to another, and the fact that housing, working conditions, and wages must compete with those prevailing in war industries all add to the problem.

Steps being taken to alleviate the manpower problem include: (1) continued deferment of farm men who Selective Service boards consider essential to war food and fiber production; (2) increased use of workers from Mexico, Jamaica, the Bahama Islands, Barbados, and Newfoundland; (3) use of all available prisoners of war; (4) intensive community recruiting drives



Poultry Research Accents Utility

LIKE many other immigrants, the modern chicken has found the United States a land of opportunity. Considered in colonial times an inferior game fowl and later often regarded merely as a source of pin money, chickens now are highly esteemed as food and have a respected financial standing. In recent years the value of their eggs, meat, and sundry other products has considerably exceeded a billion dollars annually, and the limits of both the food output and earning power of the Nation's poultry are not yet in sight.

The 934 million chickens raised on farms last year plus the 252 million commercial broilers, if evenly distributed, would have provided every person in the United States with 8 chickens apiece. For a family of 5 persons this would mean a potful of chicken about every 10 days.

The explanation for this rise of the feathered tribe to a high position, both gastronomically and in our national economy, lies only partly in the chicken's inherent biological efficiency. Other important elements responsible for poultry progress have been the business capacity of the American people, their flair for organization, and their support of research work. Substantial evidence bears this out.

Rags to Riches

True to the theme of success stories, the chicken came from a humble home, the lush jungles of New Guinea, Java, and Malaya, now the scene of Pacific warfare. Learning of these interesting creatures, explorers and colonists carried them to other lands so that poultry raising was well established in the Eastern Hemisphere, including Europe, when settlement of the American Colonies began. Yet within the few hundred years that have elapsed since then—the span of only about 10

human generations—the United States has built up its poultry population until it is now twice that of any other country and probably more than a third of the world's total.

Large Meat Poundage

Since Pearl Harbor, even in the face of general world food shortages, poultry products have continued to be one of our largest and most dependable food resources. They have simultaneously eased the burden of meat rationing at home and contributed to large food exports. During the spring of 1944, the greatest concern in regard to egg supplies was not to get sufficient production but rather to find enough containers and storage room to keep pace with the hens' shell-filling operations. In meat production, the poultry of this country are now providing a poundage equivalent to nearly half the supply of beef, a third of the pork, and about four times the mutton and lamb produced.

Both in composition and nutritive value, poultry meat, either white or dark, differs little from other lean meats; and the fat of the meat of an average chicken is similar in quantity and distribution to the fat of lean beef. One commendable food habit favorable to the use of poultry is the common inclusion of edible organs—heart, liver, and gizzard—when birds are cooked and served. These nutritionally valuable organs are not usually served with the muscle-tissue cuts of other animals.

Especially in recent years, poultrymen of the United States have concentrated their efforts on developing greater utility value in their birds. Accent on this quality is in contrast to earlier interest in breeding for attractive plumage and other exhibition points, or, as in some parts of the world, in developing strains for cock fighting. In the quest for greater utility value, scientific workers skilled in such fields

as genetics, nutrition, and veterinary science have provided the answers to many problems that have perplexed poultrymen.

200-Egg Layers

Research showing clearly that both egg production and the quality of poultry meat are inherited has led to selective breeding and progeny testing. Largely through use of this knowledge, average yearly egg production per hen in the United States has increased from 86 to 113 in the last quarter century. But 113 eggs is only about half the production of truly superior birds now being raised in mounting numbers. To aid poultrymen in obtaining high-quality breeding stock the Department of Agriculture, in cooperation with 45 States, conducts a National Poultry Improvement Plan. It issues, in connection with that plan, an annual directory of U. S. Register of Merit birds, both male and female, with the names of the breeders. About 3,000 birds have thus far met the specified high standards. They represent blood lines with a capacity for producing upwards of 200 eggs a year per bird.

To help attain wartime production goals, specialists of the Bureau of Animal Industry who administer the plan have sponsored, during the last 2 years, the use of "Victory cockerels" to head hatchery supply flocks. A Victory cockerel signifies production breeding equal or superior to that of U. S. Certified cockerels, which is an advanced breeding stage of the plan. Birds of this quality, now being extensively used, increase the egg production of average flocks about 10 percent. Further poultry breeding studies have disclosed benefits from crossing inbred chickens of different breeds. In a recent test, a combination of inbred Rhode Island Reds and White Leghorns increased annual egg production about 15 percent over that of comparable parent stock.

New Feed Sources

Wartime scarcities of several important poultry feeds have caused in-

tensive search for satisfactory substitutes. Last year this effort established the value of the grain sorghums—yellow milo and hegari—for laying hens. In a well-balanced diet, these feedstuffs proved to have about the same value as corn.

Another line of experimentation was conducted to determine what effect the fat content of the diet of hens might have on the hatchability of their eggs. These studies were prompted by the large quantities of vegetable oils used in poultry feeds as carriers of fat-soluble vitamins. On the other hand, in the preparation of meat scraps and oilseed meals much of the fat and oil originally present is extracted. But even the wide variation of 0.8 to 8.8 percent in the fat content of feeds tested had no effect on hatchability or on the time that embryonic mortality occurred. This research thus removes possible worry on that score.

Disease Control

Activity on the disease-control front has included an intensive drive to conquer pullorum disease. This costly infection, transmitted from parent stock through the egg to chicks, once resulted in high death losses. Modern control consists in blood testing breeding stock and removing reactors to the test. Last year official tests on more than 18 million birds disclosed only 2.43 percent of reactors. This was a record year in both volume of testing and low percentage of affected birds, signifying distinct progress toward eradication.

A further advance toward better poultry health was the discovery by the Bureau of Animal Industry that sulfaguanidine, one of the sulfa drugs, protects chickens against cecal coccidiosis, a parasitic disease highly fatal to birds.

Another discovery gives promise of sharply reducing the waste of millions of pounds of wet-picked chicken and turkey feathers. Normally wet feathers spoil so quickly that they have little commercial value except as fertilizer.

The discovery was a simple, cheap preservative consisting of a weak aqueous solution of hydrochloric acid and salt. Feathers preserved by this method keep for fully a month, even in hot weather, which is sufficient time for them to reach processing plants. Processed feathers find wartime use as filling for sleeping bags, pillows, and coat linings and for soundproofing parts of airplanes.

Although research prompted by war needs has the right of way, the scientists, as they have the time, are gathering and fitting together data likely to be useful in the post-war world. The prospective need for rehabilitating poultry flocks in countries pillaged by

the enemy has aroused interest in the shipment, by airplane, of high-quality hatching eggs and baby chicks.

An ingenious line of scientific research that has already given encouraging results is the "pasteurization" of shell eggs to improve their keeping quality in warm climates, in the absence of refrigeration. The heat treatment is known as "albumen stabilization," and the range of temperatures is lower than cooking heat but higher than that of incubation. A related field of study still largely unexplored is the sterilization of shell eggs for micro-organisms in them.

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Agricultural Research Administration

The Cold Storage Situation

IN NORMAL times cold storage space acts as a "shock absorber" for seasonal food surpluses, helping to even out consumption throughout the year. Some months during the year cold-storage space occupancy was high, others low. It averaged about 50 percent of capacity throughout a year, in pre-war days. In contrast, occupancy has been running over 80 percent—often near 90—for the past several months. Such a continued high percentage of occupancy has presented many problems, some anticipated, others not foreseen.

Naturally, the war made necessary a big increase in food production. A third more food was produced in 1943 than the average for the pre-war years 1935-39. And in 1944, with good weather, even more may be produced. Food grain, fruit and vegetable prospects already point in this direction.

Just as any thoughtful housewife buys more food to put in her refrigerator when she expects to feed more people, Uncle Sam is putting more food in his "ice boxes" because he has produced sufficient food to feed about a third more people than before the

war. American civilians eat more—about 6 percent more per capita than in pre-war years. And the average American serviceman eats about a third more than the average civilian. In addition, American food is being sent to our allies, to liberated areas, to friendly nations, and to other special war claimants. Such a feeding program, with many highly specialized needs, has naturally meant full larders up and down the line.

Expected or not, crowding of cold-storage facilities has brought about many problems. In some cases, if events could have been more accurately foreseen, many difficulties could have been alleviated. Other difficulties resulted from very much greater production than expected with the consequent further occupancy of cold-storage space—more than planned. The recent egg storage problem is a good example.

In the beginning it was necessary to build up food reserves from scratch. Besides meeting current consumption needs, a supply had to be accumulated and started on its way through the food pipeline—which accounts for the

sharp increase in storage stocks during the past 15 months. By now, though, reserves are pretty well built up so Government purchases are largely to replace food which has been consumed.

Each day, the Nation uses more food, and therefore each day it must have more than normal storage stocks in order to keep going. Most of the food now in public storage is privately owned. The exact percentage is not available because total military stocks are confidential. But the trade owns the bulk of the fresh and frozen fruits and vegetables in storage, all the cream, more than half of the shell eggs, nearly all the frozen eggs, and most of the frozen poultry and meat. In fact, the only major foods in cold storage held mainly by the Government are butter, cheese, and lard. The War Food Administration holds relatively little pork and almost no beef, lamb, or mutton in public cold storage, though the armed forces have stocks of all these meats in public freezers.

But other factors, most of them concomitants or direct results of war, contribute both to the generally higher level as well as to the peaks and valleys of cold-storage occupancy.

Advance Stocks for Military

One of these factors is the necessity of having on hand long-range stocks of food for military use. When the housewife has more people to feed, she stocks food for a day or a week, in advance. Food for our soldiers must be stocked for months in advance. Part of that supply is always in transit, part is in warehouses awaiting shipment. To some extent, this is also true of food procurement for our allies and other war programs.

Another factor is the seasonality of production. Food always has been produced seasonally, of course, but now, because more food is being produced than ever before, storage peaks are bound to be higher than usual. Eggs, for instance, have taken up a

great deal of cooler and freezer space this past spring because millions more of them were produced than before the war. Seasonality is important even when production is not up particularly—and even when it has declined. Butter output was smaller last year than before the war, yet butter storage reached a new peak because much more butter is produced in spring and summer than in fall and winter. Accordingly, War Food and the armed forces bought the bulk of their year's requirements during the spring and summer months of heavy production, and ceased buying entirely during the winter. This method of buying not only assured readily available butter supplies for the Government, but also helped make the civilian supply fairly steady the year around. Seasonal butter procurement is being continued this summer.

Food Must be Ready for Ships

A third factor in the current strain on storage facilities is that out-movements are subject to the fortunes of war. If cargo space does not arrive on time to hold the food which has been brought to port to fill that space, the food piles up inevitably. Two weeks later, on the other hand, cargo ships may be arriving faster than was planned, and great quantities of food will be needed to fill them. Such uncertainty is hard on warehousemen, but it is a military necessity that food wait for ships, not ships for food.

Price support programs also affect the storage situation. To encourage the additional production needed, the Government guaranteed support or floor prices for eggs, potatoes, cheese, and other essential foods, and when more of one of these commodities is grown than is needed, the Government is obligated to buy them at that price if there are no other takers.

So that present cold-storage facilities might go as far as possible toward meeting current demands, several programs for protecting the food in existing space are being carried out.

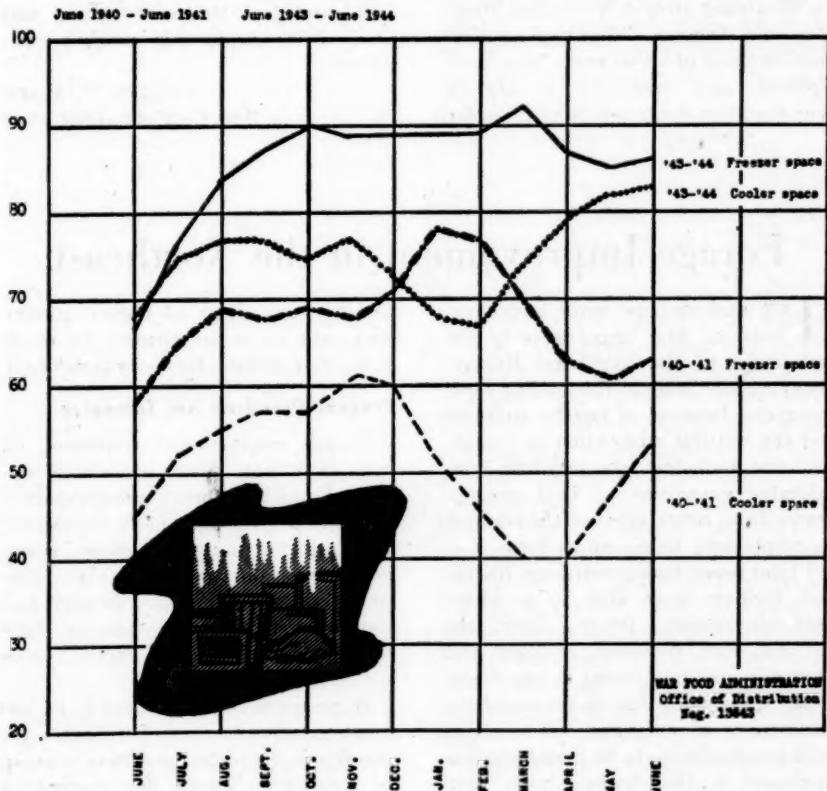
These programs include: (1) speeding up the processing of products so that they will not require too much refrigerated space; (2) carrying on a vigorous campaign with all warehousmen to get the most effective use of their space; (3) exchanging information among Government agencies through the Inter-Agency Cold Storage Committee; and (4) collecting and releasing to the public complete up-to-date information on space capacity, space occupancy, and commodity holdings.

In addition to these programs, orders have been issued to prevent use of cold-storage space for products which do not need it and to limit the total time any commodity may remain in it. Commodity holders throughout the country who have commodities to

store are kept constantly informed on available refrigerated space so that they will know where to find space. Reservation of empty space for future needs, a practice which kept idle thousands of cubic feet is prohibited. Moreover, excess storage stocks of frozen fruits, vegetables, and poultry have been reduced substantially.

To make the best possible use of available space, warehousemen have been aided in obtaining priorities on materials and machinery which will permit them to use cold-storage rooms as either freezer or cooler space and thus add flexibility to their storage operations and bring about more efficient use of space. Finally, considerable effort has been exerted to bring into use ice-storage facilities and other

OCCUPANCY OF REFRIGERATED SPACE IN PUBLIC WAREHOUSES



types of refrigerated rooms which could be used during emergencies for storing certain types of food.

Because of growing cold-storage requirements, some expansion of facilities in critical areas became necessary. This expansion has been tempered by shortages of many necessary materials and also by the prospect of shrinking post-war demand for warehouse facilities. Construction since June 1941 has amounted to about 3½ million cubic feet of public cooler space and 14½ million feet of public freezer space. It seems clear, however, that even with the best possible management, present storage space will not be adequate in some areas. Therefore, expansion has been planned for future as well as immediate needs in critical areas such as the West Coast around San Francisco Bay, Los Angeles, and Portland; the Dallas-Fort Worth area; the Midwest; and the Southeast around Nashville, Memphis, and Atlanta. Building applications in some of these areas have been received, and expansion of slightly over 6 million cubic feet is in progress.

In the beginning of the Nation's food program, claimant groups for the available supply sometimes over-estimated their future needs. Also, the hazards of war make it necessary for the Government to buy emergency reserves of food for needs which sometimes do not materialize. Such food stocks often are later released to civilians. War Food Administration is constantly reviewing its inventories, and any foods which can be released are being resold in an orderly manner to the civilian trade. These operations not only free storage space now, but also reduce the size of the post-war food problem. Assurances have been given that all Government stocks will be released through the trade and that those manufacturers or packers who originally sold products to the Government will have first chance to buy them back. Moreover, these releases will be timed to avoid seasonal surpluses, temporary gluts, and other price depressing market conditions.

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Forage Improvement in the Northeast

HAY and pasture crops have long been of first importance in the agriculture of the Northeast Region. Dairying has become the leading farm enterprise because of nearby markets and the natural adaptation to forage. But the industry has required considerable quantities of feed concentrates from other areas of the country to supplement home-grown feeds.

Under peace-time conditions, Northeast farmers were able to purchase feed concentrates freely. Now, the national feed situation is tight and inter-regional movement is uncertain. This rapid change has underscored the importance of roughage. If essential milk production is to be maintained or increased in the Region, more hay,

pasture, and silage of higher quality may have to be substituted for much of the concentrates formerly purchased.

Present Practices Not Intensive

Forage management practices, on most Northeast farms are not intensive. Grass hays form the major part of the winter roughage; fields frequently remain in hay for 5 or more years. Permanent pastures are the main source of summer feed. Brushy and containing chiefly native grasses, these pastures produce poorly except in the spring and early summer.

Here are details for a group of 150 representative farms in Vermont. On the whole, these farmers have a grasp of recommendations for improving

roughage, but few have undertaken improvement practices on their own initiative. All of the lime and 95 percent of the superphosphate used this cropping season was obtained through the AAA. Eight out of every 10 farms used lime and superphosphate and 6 out of 10 used other materials such as mixed fertilizers, nitrates, potash, etc. About 90 percent of all materials was applied on cropland—25 percent received some treatment. In contrast, only 1 percent of the pasture acreage received lime and fertilizer and, in spite of the urgent need, rarely had farmers developed good mid-summer pasture.

Pilot Farms Show Possibilities

Nevertheless, in the same areas, several farmers have improved their roughage production to a point where the amount of purchased concentrates can be drastically reduced. They demonstrate the possibilities and act as pilot farms in the neighborhood.

Through good cropland management and moderate amounts of lime and fertilizer materials, one operator now has all his cropland in a flexible hay-pasture system. In the spring and early summer, the dairy herd is carried on the permanent pasture. Therefore, this acreage can be limited to that needed during the flush period to carry the herd, and maintenance costs of the permanent pasture are at a minimum. In the meantime, hay is cut from the cropland. The following growth of ladino-grass mixture is then pastured by the herd. Hay is cut whenever the growth is more than the herd can control.

Another farmer has a somewhat different forage program, but one that is nearly as effective. He uses the standard timothy-red clover hay in short rotation and depends upon annual pasture to carry the herd during the mid-summer. One fact stands out in these cases—in both, a definite crop rotation and good care of farm manure goes hand-in-hand with the moderate use of purchased fertilizer materials.

The widespread need for forage improvement can be visualized through a comparison of feed needs and feed supplies on a typical Northeast dairy farm. Points of interest in the comparison are: (1) in May, the nutrient supply exceeds requirements by a wide margin; (2) during July and August, the supply falls considerably short of nutrient needs; (3) feed concentrates, mostly bought, furnish 30 to 40 percent of the nutrient during the winter feeding period and 20 to 35 percent in the pasture period; (4) in only 1 month does home-grown forage supply total nutrient needs.

Normally, these conditions would have important implications for improved management and greater income. Now that feed concentrates may be difficult to obtain in usual quantities, the situation assumes even more importance. If less concentrate is fed without an offsetting increase in roughage, nutrient supplies would be below the requirement level throughout most of the year and milk production would decline.

More Roughage the Keystone

A roughage improvement program is the keystone of adjustments to increase feed nutrient supplies and maintain milk production in the Northeast. Basic to this end is an effective use of common crops and a few recently developed crops adapted to the area, as well as the increased use of approved methods of crop management on selected areas. Effective use of various crops involves a recognition of the outstanding characteristics of each and the development of a forage program around these points. For example, native bluegrass pastures produce abundantly only for 4 to 6 weeks in the spring and early summer. During this period, permanent pasture should be the mainstay of the pasture program on most farms. Before and after this flush period, other crops should be the main sources of pasture.

Implications of this procedure are that the acreage of permanent pasture

can be limited to the demand during the flush period. Thus, an improvement program can be confined to a smaller area and land may be freed for other uses. Another case is timothy, a hardy grass that has a definite place in hay production in the Northeast. Where alfalfa cannot be grown or where losses from winter-killing are frequent, timothy or timothy-clover mixtures provide a high-quality hay if cut in the early stages of growth. Using it correctly is the key to good results.

Steps in Program

Steps of a forage improvement program, long emphasized by state and Federal agricultural agencies, include:

- (1) Annual grasses such as winter wheat and rye, oats, sudan grass, and millet used for late fall, early spring, and mid-summer grazing.
 - (2) Smaller areas of improved permanent pasture mainly for use during late spring and early summer.
 - (3) Seeded ladino-grass mixture cut for hay or silage during flush period of permanent pastures and grazed during mid and late summer.
 - (4) Grazing of aftermath when following crop will not be damaged.
 - (5) Rotation grazing, mowing permanent pasture, and similar management practices.
 - (6) Early cut timothy-clover hay or silage grown in short rotation.
 - (7) Early cut grass hay or silage on less easily tilled cropland maintained by frequent top dressing with complete fertilizer or manure fortified with superphosphate.
 - (8) Alfalfa hay grown on area where the opportunity for success is high.
 - (9) Hybrid corn silage where sufficient roughage cannot be grown as hay or grass silage or where succulent feed is desired.
- Wise care and use of farm manure together with the use of lime and commercial fertilizers is necessary to make many of these steps practical.

It is not too late to step up forage production in the Northeast in 1944. This can be done through the use of nitrogen fertilizer and by increased seedings of annual crops. These steps are primarily to meet the current need; but, in addition, many can be tied into a sound forage improvement program for the future. All will usually increase net farm income while helping to maintain milk production. Labor requirements will be increased somewhat but, as there is considerable flexibility in timing, the present labor force could usually carry out the practices. New equipment would not be needed on most farms at this time. Eventually, new methods of handling forage will dictate the use of new and different kinds of equipment.

Nitrogen gives a quick boost to plant growth if moisture is sufficient and wider use should prove profitable, particularly during periods of feed shortage. Top-dressing old timothy hayland with 40 to 60 pounds of nitrogen per acre will generally increase yields $\frac{1}{2}$ to $\frac{3}{4}$ tons per acre. This, combined with early cutting, will result in more hay of better quality at low cost. Pastures, corn, and small grain generally respond well to applications of nitrates.

Late Nitrogen Use Feasible

In contrast to most other fertilizers, nitrogen can be applied fairly late in the crop season and still get results during the current year. Aftermath for hay or pasture will be stimulated by top-dressing with nitrogen after the first cutting of hay. Some growth can be encouraged on permanent pastures by applying nitrogen even after the flush period of May and June.

During mid-summer and fall, annual pasture crops can supply a large proportion of the nutrient needs of a dairy herd. Millet or a combination of millet and soybeans can be grazed 3 to 4 weeks after seeding. One acre to 3 cows is usually enough. Oats or sudan grass are two other crops that will help fill in the mid-summer gap in

pasturage. Controlled grazing of oats will not injure seedlings; thus, more seeded hayfields or ladino pasture can be available in 1945. Sudan grass is especially valuable in warm weather and usually produces well even when seeded late.

Barley, seeded in mid-summer, will give an excellent pasture crop throughout the fall in most of the Northeast. If more nutrients can be obtained from pasture at this time, the summer grain-feeding schedule can be continued; milk production can be maintained without resorting to winter roughage and more feed concentrates. Rye and wheat seeded in late summer will also provide some pasturage in the fall. What is perhaps more important is that these two crops start growth very early in the spring and are available

for pasture one to two weeks earlier than native grasses.

Immediate adjustments in roughage production should be directed, whenever practical, toward increasing future quality and quantity of forage crops in the Northeast. A well-rounded forage improvement program frequently takes several years to accomplish. More plowing, seeding, and fertilizing done in an emergency can be the first steps in the more intensive and selective use of land resources that makes up such a program. Full utilization of forage as a source of feed nutrients is the basis of a permanent and efficient dairy industry in the Northeast.

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Agricultural Transportation Outlook

CONTINUATION of war on a global basis throughout 1944, resulting in a total demand for domestic transportation during the second half of the year as great as for the same period in 1943, will mean another tight situation during the peak movement of agricultural products this fall and early winter.

Railroad Outlook

A small bright spot in the transportation picture is the prospect for some additional railroad equipment so that rail capacity can be gradually expanded in the months ahead. A few more usable locomotives than in 1943 are now available and construction schedules of freight cars indicate a little larger supply in time to help meet the October traffic peak.

From the standpoint of rail capacity, it seems clear that the chief bottleneck will be shortages of manpower in many parts of the country. The rail manpower problem, which is already very serious, is likely to become even more acute this autumn, at least in some areas. The primary need numer-

ically is for laborers, but the shortage of skilled shop workers is perhaps of greater concern because of their key importance in the maintenance of rolling stock and equipment at a high level of efficiency.

An undetermined increase over a year ago in the railroad share of total rail and motortruck traffic is expected this autumn. This will probably be offset in some measure, but not balanced, by a return to the normal water routes along the Atlantic seaboard and the Great Lakes of some traffic which moved by railroad last year.

The distribution of rail traffic in 1943 by six-month periods shows that 52.5 percent of the carloadings were hauled in the last 26 weeks. Approximately 52 percent of the rail ton-miles were also transported in the last 6 months of the year. In the first half of 1944, both carloadings and ton-miles have been running ahead of the same period in 1943. The performance of the railroads in the last half of 1943 must have been very close to capacity, which, owing to the manpower situation, may

not be any greater in the last half of 1944. In fact, for that reason, it may not be as great.

The proportion of railroad ton-miles involving raw and processed agricultural products is probably less than 25 percent of the total ton-miles. Therefore, a substantial increase in the ton-miles for agriculture could mean a relatively small change in the ton-miles for all traffic. Such a change would mean less from the over-all standpoint of manpower and motive power than from the standpoint of car supply, because the whole effect of the change would fall on the special types of cars used for much agricultural traffic, particularly box, stock, and refrigerator cars.

This fact is significant in the case of grain traffic, which uses box cars, because, while the number of box cars is large, only those owned by the western grain roads have been built to satisfy the special requirements of the grain traffic. For these reasons, a change in the volume of agricultural traffic has to be considered separately in terms of the various commodity groups involved. The most important of these groups are grain, livestock, and perishables requiring refrigerator car service.

Grains by Rail

The average turn-around time of grain cars for the season ahead will be reduced because the cars will not be used as much as last year for long-distance shipments of wheat as feed either from Canadian or domestic origins. This change, taken in connection with other prospects for the utilization of wheat, indicates a net reduction of about 200,000,000 bushels in the quantity to be transported from primary markets, including the imports from Canada. As a percentage of the total utilization in 1943-44, including exports, the reduction in traffic referred to will be around 16 percent.

It is quite likely that, with a record crop in sight, the volume of wheat for the whole 1944-45 season shipped

from country points to primary markets will be a great many bushels above what it was for the season in 1943-44. However, it is also likely that a much greater proportion of this season's total movement from country points will be in the months of July to December, inclusive. This means that the railroads serving the wheat-producing areas will be very active in that service during the remaining months of 1944.

On the basis of present information, however, it is reasonable to assume that the production of all grains for feed will be about 2.2 million tons in 1943-44, although it is too early to say definitely what the corn crop will be. If the feeding of animals declines in feed-deficit areas, a decline in rail tonnage greater than in production may be expected.

Livestock by Rail

The peak cattle movement, which ordinarily occurs in October each year, comes at the same time for both rail and motortruck. This peak is caused primarily by the long-distant rail movement of cattle from western ranges to midwestern markets and feedlots. This autumn's rail peak for cattle will undoubtedly be greater than a year ago, while hog movement until October will be as large or larger.

In contrast, current indications are that hog marketings at the peak next winter will be substantially below the record level of a year ago, possibly by as much as 25 percent. If the motor-trucks carry a volume approaching that of last year's peak, a significant decline in rail shipments of hogs is to be expected. In any event, it appears that the rails will face their greatest task at the time of the expected October peak in cattle shipments.

Fruits, Vegetables by Rail

The prospects are that there will be little change in fresh vegetables marketings by rail, comparing the last half of 1944 with a year earlier except for a possible shift from motortrucks to

railroads in the eastern market area where shipments of vegetables during the summer and early fall are expected to exceed those of last year. If an indicated 10 to 20 percent reduction in the late potato crop materializes, some savings in the use of refrigerator cars for the fresh vegetable traffic are to be expected. However, a reduction in the number of refrigerator cars requested for potatoes during the period is likely to be more than offset by an increase in the number required for fresh fruits.

Apple production, which was low in the eastern States last year, is expected to be larger this year, and the June crop report indicated that a somewhat better condition is in prospect for apples in the State of Washington. Any increase in the number of refrigerator cars required for apples, particularly from the Pacific Coast area, considered along with the probable increase in the number of cars required for citrus fruits during the last half of 1944, will mean a tight supply of those cars. The increases in traffic cannot be estimated at this time because of uncertainties as to production and the performance of motortrucks. Grapes may require as much rail transportation this year as last, even though production may not be up to the level of a year ago. Fruits other than those mentioned may require somewhat more transportation than last year.

Fresh fruit and vegetable prospects indicate the traffic in the months ahead will exceed that in the last half of 1943, possibly by a substantial margin. The railroads may find it very difficult to meet the demands for refrigerator cars during the peak autumn and winter season. This suggests the advisability of restoring boat service for citrus fruits from Florida to eastern ports, if it is possible to do so.

Cotton, Oil Crops by Rail

An increase of approximately 5 percent in soybean production may occur, but crushing capacity in the main producing areas has been increased. Consequently, there will be less need

to transport beans from the Corn Belt producing areas to southern mills for crushing. A much smaller flaxseed crop is expected, and the prospect of a slight increase in peanut production is not very important from a transportation standpoint. The production of cottonseed may be less than last year. As the hauls of this commodity are usually short, and are likely to be about the same as last year, the traffic will decline if the expected crop reduction materializes. Cotton manufacturers are not taking as much cotton as they did a year ago and shipments of cotton to mills and ports will probably be no greater than last year.

At this stage in the railroad situation little can be done, apart from what is being done, to meet prospective rail difficulties except that steps should be taken to insure the best possible use of available rail manpower. If the railroads are unable to secure adequate help they will not be able to use their facilities to the best advantage. Shippers of agricultural products, especially wheat, cattle, and fresh fruits and vegetables, are likely to feel the pinch if rail capacity should prove to be short of the needs of the traffic.

Truck Prospects

Whatever the total tonnage of agricultural products may be during the coming peak marketing season, there will be difficulty in finding an adequate number of motortrucks to haul their normal share of the traffic. A portion of the peak movement of all commodities can accordingly be expected to shift from trucks to rails. The extent to which such a shift may be expected is illustrated by reference to data on the transportation of livestock and fresh fruits and vegetables. Each of these commodity groups relies heavily on motortrucks in the marketing process.

Livestock by Truck

In livestock marketing, trucks haul a lesser proportion of the traffic in peak than in off-peak seasons. For example, in the marketing of hogs for

1943-44 during the low seasonal period in August, the trucks hauled 68.6 percent of the total receipts at public stockyards. In January 1944, at the height of the hog marketing season, the trucks hauled 63.6 percent of the volume. The same situation also prevailed during the two preceding seasons.

A similar situation prevailed in the marketing of cattle. During the slack month of May 1943, trucks hauled 61.9 percent of the cattle receipts, but at the peak in October 1943, they hauled only 48.8 percent because they do not share in much of the long-distant movement of range cattle. Similar decreases in the proportions of truck receipts of cattle at the peak season occurred in 1941 and 1942.

In terms of absolute tonnage, however, the trucks haul more animals in the peak season than in the off-peak season. In January 1944, for instance, trucks hauled 3,338,000 head of hogs, or more than in any previous month on record. The unprecedented livestock movement of last year by truck was due almost entirely to the record run of hogs.

During the coming livestock marketing season, trucks may not have capacity to handle as many hogs as last season. With an anticipated decline in the total marketing of hogs, it would not be surprising to note an increase in the proportion of hogs going by truck although the absolute volume during the peak season may decline to a substantial extent. Likewise, trucks may not be able to meet all demands for moving cattle from the range to rail loading platforms.

The extremely high peak tonnage of livestock last year was made possible by better utilization of trucks. Even though some decline may be anticipated in the total tonnage, extreme conservation efforts must be practiced next fall to enable truck tonnage to move.

Fruits, Vegetables by Truck

Unlike the livestock movements, truck and rail peaks in the marketing

of fresh fruits and vegetables come at different periods, because of seasonal and geographical differences in production. The peak truck movement of fresh fruits and vegetables occurs in July and August, after which truck receipts exhibit a marked seasonal decline. The peak rail movement comes at two different times, one in May and June and the other in September and October. Concurrently with the July-August peak in the trucking of fresh fruits and vegetables, there is a sharp decline in rail unloads, because truck unloads are derived from producing areas located near the great consuming centers, whereas rail unloads come from large commercial producing areas located at great distances from market. Although some of the peak truck tonnage might be shifted to the railroads, the bulk of this tonnage is greatly dependent upon motortrucks for convenient service.

Traffic Peaks Shifted

Some of the shift in peak traffic referred to has already taken place. During 1943, August truck unloads at 12 large markets declined 10.6 percent below the previous August, whereas rail carloads remained at about the August 1942 level. The fact that rail cars have been loaded heavier would indicate a considerable shift of peak fresh fruit and vegetable traffic from trucks to rails during 1943. This year, vegetable marketings from areas contiguous to the great centers of population are expected to increase materially in July, August, and September. Trucks will not be able to handle much, if any, of this increase, since during the peak in August last year, truck shipments declined 10.6 percent from the year before at 12 leading markets. It seems likely that the dwindling supply of trucks will be inadequate to handle the expected load.

A large crop of apples in the eastern producing area is expected to complicate the trucking problem in the fall of 1944. Production in Virginia will

be about twice that of last year and considerably above the 1934-42 average. While the seasonal decline in the summer vegetable marketing may release some trucks for the apple traffic, a great amount of the excess production in Virginia must go to market by railroad.

All agricultural products dependent on motortruck service can be expected to face many difficulties during the coming marketing season. Shortages

of equipment, replacement parts, drivers, and mechanics will undoubtedly curtail truck service in many areas. Such difficulties will be experienced by shippers of cotton, coarse grains, and other farm products, for which available data do not permit analyses similar to those presented for livestock and fresh fruits and vegetables.

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A Rural-Urban Community Plans Ahead

THE WAR has brought "good times" to rural America. The high level of non-farm employment at good wages, together with military and other Government demands, have provided farmers and businessmen with good markets at favorable prices. Many communities, however, are becoming concerned about the problems that lie ahead as war production declines. They remember the period of unemployment, declining markets and lower prices following the prosperity of the last war. Farmers now appreciate more fully what full employment in cities and towns means to them. Some communities are beginning now to plan toward meeting these future problems with constructive action. Fort Smith, Ark., is one agricultural community that is making plans now. Here farmers, businessmen, working groups, public officials, and others are working together to meet the problems ahead.

The Community

Fort Smith, a town of 40,000 civilian population on the western border of Arkansas, is located on the Arkansas River and serves as the wholesale trade center for a large agricultural area in Arkansas and Oklahoma. During the present war-training program nearby Camp Chaffee was constructed on 70,000 acres, most of which was formerly in farms. The population in Fort Smith has increased during the war even though it has decreased for the trade

area as a whole. This increase has been due in large part to the amount of civilian employment required to construct and maintain Camp Chaffee as well as to an estimated 3,000 officers and men stationed there who maintain homes in Fort Smith.

In addition to the various industries usually found in connection with the wholesale business in a center of its size, Fort Smith has seven furniture factories, three glass factories, one zinc smelter, and one scissors factory. There are no war industries, though a few firms have war contracts such as one furniture factory making shell boxes. There will be fewer problems of converting to peacetime operations after the war than in other communities.

Farmers, businessmen, working people, and others in Fort Smith recognize the major post-war problem to be the maintenance of full employment at useful work for all who want jobs. In the past there have been more people living on farms in the area than could be fully employed at farming. A large number of people who have left the area to enter military service or work in war production centers will return to seek jobs.

Facts Before Plans

Before making specific plans as to what could be done toward expanding employment opportunities in the area, it was agreed that reliable facts about the locality were necessary. Surveys were made to collect current ideas,

data, and other information which would serve as a basis for intelligent planning. The planning efforts in Fort Smith were initiated by the Post-War Planning Committee of the Chamber of Commerce which enlisted the participation of other groups. Farmers, businessmen, working people, schools, and others were asked to contribute information and ideas and participate in developing various plans. The University of Arkansas and the United States Department of Agriculture are two of several "outside" agencies which assisted local people in the collection of this information.

What Surveys Show

Indications point to a larger number of both men and women desiring non-farm employment than before the war. There has been very little change in the number of persons employed in manufacturing and commerce in Fort Smith during the war. Employers' present estimates of labor requirements after the war indicate an increase in non-farm job opportunities.

Farm and town families indicated their intentions to buy items in a selected list of consumer goods as compared with their purchases of these items before the war. This comparison gave some indication of the pattern of consumer expenditures after the war. The pattern of post-war spending will serve two purposes: (1) it will offer a guide to businessmen in adjusting to a peacetime business; (2) it will provide a basis for revising estimates of prospective employment opportunities.

A public works committee, composed of businessmen and public officials, studied public improvements needed in Fort Smith and the area immediately surrounding. Projects, such as improvement of streets, schools, water and sewer systems, calling for the expenditure of public funds, were listed in order of need with consideration given to the prospects of funds available.

A financial analysis of the area by the Federal Reserve Bank of St. Louis

gives a very optimistic picture for the area. The financial condition of business and governmental units has improved in recent years. Cash savings held by private individuals promise to be at high levels at the end of the war. These capital resources can be put to work providing more opportunities for productive employment in the area.

Further Studies

These preliminary studies suggest among other things matters needing further study of a more intensive nature. Such further studies will be directed toward specific opportunities for expanding existing enterprises or establishing new ones. A major consideration will be farm products of the area as a source of raw material for industries which might be located in the area. Considerable amounts of fruits and vegetables are produced both for processing in the area and for fresh market. Further development of food preservation techniques, such as quick freezing, will provide farmers with a more dependable market. Such perishables as strawberries which must now reach retail markets within a matter of hours after harvest can, with quick freezing, be marketed over a longer season. A quick-freeze plant is being set up in connection with one of the ice plants in Fort Smith. This plant will freeze quantities of the various fruits and vegetables produced in the area and prepare for shipping to retail markets. Inquiries are being made as to the possibility of setting up quick-freeze units for the commercial processing of fruits and vegetables in other parts of the area.

Forest products are also an important source of raw materials in the area. At present, wood is going into such uses as railroad ties which would yield greater return as mill wood for furniture and handles. The problem of wood waste from the furniture factories located in Fort Smith is receiving further study. These wastes which are being burned as fuel by some

factories, while others are making no use of them, are being studied as a possible raw material for some new enterprise.

Besides the resources of raw materials, labor, and capital which have been mentioned, other factors must be considered in expanding existing enterprises or establishment of new ones. New techniques are in constant process of development. Quick freezing is opening up new opportunities in the marketing of fruits and vegetables. Air transport of perishable foods has many possibilities. Markets, both local and more distant, for possible products, along with the comparative advantages of competing areas in relation to resources, markets and transportation costs, are also being considered.

In the rural areas many opportunities exist for small enterprises ranging from a small sawmill operated by a farmer in conjunction with his farming enterprise to a creamery or cheese factory operating the year round as a cooperative enterprise or owned by one or two persons. The development of these small-scale enterprises will be influenced to no small extent by making electric power available to these areas. The development of industries along existing or proposed electric lines will make possible the further extension of electric service to rural areas. This complementary relationship of farm and industry electrification is very important. Cheap electric power available to farmers will make possible the use of electric cream separators, water pumps, refrigeration, and a host of other appliances for the farm and dwelling; thus making every farm so equipped virtually a small industrial plant.

Technical experts from public agencies have visited Fort Smith to discuss the possibilities of various types of new enterprise. Among them were a textile manufacturing specialist, and a specialist on forestry and forest products.

The studies outlined here provide

an inventory of the local resources and the feasibility of further development. With this information the community is ready to look toward the setting up of specific plants or other facilities. The information can be made available to concerns who might be interested in establishing a branch in the locality or some individual or group of individuals in the community who might wish to set up an enterprise using local capital and local management. The community will assume the final responsibility of securing such enterprises.

Similar Efforts Elsewhere

Similar planning efforts are going forward in other communities throughout the country. Interest in such planning will, no doubt, increase as the end of the war draws nearer.

Communities undertaking these studies will find technical assistance very helpful in gathering information on engineering and economic problems. The United States Department of Agriculture is attempting to organize such technical information so that it can be brought to focus on communities wanting it. Many public and private organizations, such as Federal agencies, certain departments of State governments, local officials, chambers of commerce, trade associations, labor unions, educational institutions, and the Committee for Economic Development, are cooperating with agricultural agencies and organizations in aiding such local studies.

T. R. REED
Bureau of Agricultural Economics

Redirecting World Agricultural Production and Trade Toward Better Nutrition. F. F. Elliott. Processed. 17 pp. Bureau of Agricultural Economics. Washington. March 1944.

Analyzed problem of achieving better nutrition as recommended by United Nations Conference on Food and Agriculture held in Hot Springs in May 1943 and by Conference on Relief and Rehabilitation held at Atlantic City in November 1943.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 = 100) ¹	Income of industrial workers (1935-39 = 100) ²	1910-14 = 100				Index of prices received by farmers (August 1909-July 1914 = 100)			
			Whole-sale prices of all commodities ³	Prices paid by farmers		Farm wage rates	Livestock and products			
				Com-modities	Com-modities, interest, and taxes		Dairy products	Poul-try and eggs	Meat animals	All live-stock
1934	75	76	109	122	129	95	101	89	70	84
1935	87	86	117	125	130	103	114	116	116	115
1936	103	100	118	124	128	111	125	114	118	120
1937	113	117	126	131	134	126	130	110	132	127
1938	89	91	115	123	127	125	114	108	115	113
1939	109	105	113	121	125	123	110	95	112	108
1940	125	119	115	122	126	126	119	96	111	112
1941	162	169	127	131	133	154	139	121	146	140
1942	199	238	144	152	151	201	162	151	188	173
1943	239	305	151	167	164	264	193	190	209	200
1943—June	236	304	152	168	164	—	187	179	213	199
July	240	306	151	169	165	274	189	183	209	198
August	242	312	151	169	165	—	192	192	208	200
September	245	315	151	169	165	—	195	201	208	203
October	247	317	150	170	166	280	198	212	204	204
November	247	318	150	171	167	—	202	219	193	201
December	241	316	151	173	169	—	203	212	194	200
1944—January	243	319	151	174	169	275	201	177	194	193
February	244	321	151	175	170	—	201	168	199	194
March	241	318	152	175	170	—	199	162	203	194
April	244	313	152	175	170	292	196	151	203	191
May	237	—	152	175	170	—	194	153	201	190
June	—	—	—	175	170	—	192	154	200	189

Year and month	Index of prices received by farmers (August 1909-July 1914 = 100)								Parity ratio ⁴	
	Crops									
	Food grains	Feed grains and hay	Tobac-co	Cotton	Oil bearing crops	Fruit	Truck crops	All crops		
1934	91	95	159	97	95	88	95	98	90	
1935	97	107	174	94	120	82	119	102	109	
1936	108	102	165	95	112	92	104	107	114	
1937	120	125	204	90	120	104	110	115	122	
1938	75	71	176	67	88	70	88	80	97	
1939	72	69	155	70	90	68	91	80	95	
1940	84	82	136	77	96	73	111	88	100	
1941	97	89	159	107	130	85	129	106	124	
1942	120	111	252	149	172	114	163	142	159	
1943	148	147	325	180	190	179	245	183	192	
1943—June	145	148	320	161	187	196	261	190	195	
July	148	151	321	158	183	216	220	188	193	
August	147	152	326	160	196	202	186	183	192	
September	150	156	315	163	199	205	180	182	193	
October	157	158	335	164	201	195	187	183	194	
November	160	158	347	156	202	196	228	187	194	
December	166	165	349	160	202	208	223	192	196	
1944—January	170	168	350	162	203	204	267	199	196	
February	170	169	348	161	205	206	247	196	195	
March	169	171	351	161	207	215	242	198	196	
April	171	172	352	163	207	237	220	200	196	
May	170	173	350	160	208	232	225	198	194	
June	165	170	350	163	210	228	231	197	193	

¹ Federal Reserve Board, adjusted for seasonal variation, revised November 1943.

² Total Income, adjusted for seasonal variation, revised March 1943.

³ Bureau of Labor Statistics.

⁴ Revised.

⁵ Ratio of prices received to prices paid, interest and taxes.

NOTE.—The index numbers of industrial production and of industrial workers' income, shown above are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income since output can be increased or decreased to some extent without much change in the number of workers.